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CLAIMS

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[Claim(s)]

[Claim 1] The motor for rotating an information record medium, and the optical unit which records information on said information record medium, or reproduces the information on said information record medium, The traversing mechanism which has the chassis which holds said motor and sends said optical unit to radial [ of said information record medium ], It has the weight prepared through an elastic body to said traversing mechanism, and has the dynamic vibration reducer which absorbs vibration which said traversing mechanism produces. Said weight of said dynamic vibration reducer The attaching hole in which said elastic body is attached, and said attaching hole are drive equipment of the information record medium which is another opening and is characterized by having weight side positioning opening for inserting the pin of a pointing device in case said weight is positioned to said chassis.

[Claim 2] Drive equipment of the information record medium according to claim 1 with which chassis side positioning opening for fitting said pin of said pointing device over the location corresponding to said weight side positioning opening is prepared in said chassis.

[Claim 3] Both said weight side positioning opening and said chassis side positioning opening are drive equipment of the information record medium according to claim 2 which is a circle configuration.

[Claim 4] Drive equipment of the information record medium according to claim 1 which has the positioning periphery section for contacting the location corresponding to said weight side positioning opening in said pin of said pointing device on said chassis.

[Claim 5] Said positioning periphery section is drive equipment of the information record medium according to claim 4 which is a crevice configuration corresponding to said weight side positioning opening.

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DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention records the information on an information record medium, or relates to the drive equipment of the information record medium of the shape of a disk for reproducing information to an information record medium.

[0002]

[Description of the Prior Art] Drawing 8 and drawing 9 have a perspective view, and show the drive equipment of the information record medium of the conventional technique. Traversing mechanism 120a with the role of drive equipment 120 moving an optical pickup 130 in the direction of a path of a disk-like information record medium, or rotating an information record medium with a spindle motor, The information record medium consists of loading, the loading device section (not shown) which ejects, and dynamic-vibration-reducer 121 grade which consists of the drive and circuit section (not shown) which controls or carries out junction with an external device, and weight 122 and two or more elastic bodies 123 in them.

[0003] The elastic body 123 which has become cylindrical shape-like in the air in order to use an elastic body 123 for anchoring, as it is the structure where weight 122 was attached in the chassis 124 through four elastic bodies 123 made of rubber when describing the structure of a dynamic vibration reducer 121 here and is further shown in drawing 9, and was beforehand attached in weight 122 is fixed to a chassis 124 with the screw 125. Therefore, it means that weight 122 was attached free [ vibration ] through the elastic body 123.

[0004] If the effectiveness of this dynamic vibration reducer 121 is described simply, the dynamic vibration reducer 121 is very useful to the drive equipment to which vibration generated because an information record medium rotates on a specific frequency, and the vibration from the outside of drive equipment 120 are absorbed, it has the effectiveness of reducing vibration of traversing mechanism 120a, and improvement in the speed of rotation of the information record medium by the spindle motor 131 progresses. That is, if an information record medium with big imbalance rotates at high speed and a big vibration occurs inside traversing mechanism 120a, since it may have a bad influence on record playback of normal information -- vibration is impressed to an optical pickup 130 -- it is useful to form a dynamic vibration reducer 121 in drive equipment 120. However, although it was very useful to have formed a dynamic vibration reducer in drive equipment, the drive equipment of the conventional technique had the fault that it was very difficult to attach a dynamic vibration reducer.

[0005]

[Problem(s) to be Solved by the Invention] Henceforth, the reason why anchoring of a dynamic vibration reducer 121 is difficult is explained. A dynamic vibration reducer 121 is the configuration that weight 122 was attached in the chassis 124 of traversing mechanism 120a through the elastic body [ two or more (drive equipment 120 four pieces) ] 123, as point \*\* was carried out. The weight 122 of a dynamic vibration reducer 121 needs to attach in a certain amount of precision, in order to prevent interference with the components and the loading device section which constitute traversing mechanism 120a. However, since it must be attached in a chassis 124 through the elastic bodies 123, such as rubber location precision is hard to secure, when attaching weight 121, weight 122 securing precision, workability is low [ weight / it is difficult to fully secure the anchoring precision of weight 121, and ]. Moreover, in order in other words to prevent interference with components, a loading device, etc. which were prepared in traversing mechanism 120a, such as a motor 131,

with the drive equipment of the conventional technique since anchoring precision was low, it is necessary to prepare a large opening beforehand, and a miniaturization is difficult.

[0006] As mentioned above, although the drive equipment with the dynamic vibration reducer of the conventional technique was drive equipment which was adapted for improvement in the speed of rotation of an information record medium, it had the fault of not being devised at all, about the anchoring precision of a dynamic vibration reducer, and the workability of anchoring. Moreover, in order to prevent interference with weight 122 and other components although anchoring precision is low therefore, the large opening needed to be prepared, and the fault peach of being difficult required the miniaturization. then, this invention cancels the above-mentioned technical problem, it can boil markedly the workability at the time of attaching the weight of a dynamic vibration reducer in the chassis of a traversing mechanism, can improve, and can improve the location precision of weight, and it aims at offering the drive equipment of the information record medium which can be miniaturized.

[0007]

[Means for Solving the Problem] A motor for invention of claim 1 to rotate an information record medium, and the optical unit which records information on said information record medium, or reproduces the information on said information record medium, The traversing mechanism which has the chassis which holds said motor and sends said optical unit to radial [ of said information record medium ], It has the weight prepared through an elastic body to said traversing mechanism, and has the dynamic vibration reducer which absorbs vibration which said traversing mechanism produces. Said weight of said dynamic vibration reducer The attaching hole in which said elastic body is attached, and said attaching hole are another opening, and in case they position said weight to said chassis, they are drive equipment of the information record medium characterized by having weight side positioning opening for inserting the pin of a pointing device. in claim 1, since it is the structure which inserts the pin for pointing devices in case weight side positioning opening is prepared in the weight of a dynamic vibration reducer and weight is positioned to a chassis using this weight side positioning opening, the positioning workability at the time of attaching weight in a chassis can be markedly alike, and can improve, and the location precision of the weight to a chassis can be improved. And since what is necessary is just to prepare weight side positioning opening in a weight side in case weight is positioned on a chassis, drive equipment cannot become large but can be miniaturized.

[0008] Chassis side positioning opening for invention of claim 2 to insert said pin of said pointing device in said chassis in the drive equipment of an information record medium according to claim 1 in the location corresponding to said weight side positioning opening is prepared. In claim 2, chassis side positioning opening for fitting the pin of a pointing device over the location corresponding to weight side positioning opening is prepared in the chassis. Thereby, the pin of a pointing device can ensure positioning of weight and a chassis using weight side positioning opening and chassis side positioning opening.

[0009] In the drive equipment of an information record medium according to claim 2, both said weight side positioning opening and said chassis side positioning opening of invention of claim 3 are circle configurations.

[0010] Invention of claim 4 has the positioning periphery section for contacting the location corresponding to said weight side positioning opening in said pin of said pointing device on said chassis in the drive equipment of an information record medium according to claim 1. In claim 4, it has the positioning periphery section for constituting the pin of a pointing device in the location corresponding to weight side positioning opening on the chassis. Thereby, positioning of weight and a chassis can be performed to a chassis side using the positioning periphery section, without preparing positioning opening.

[0011] In the drive equipment of an information record medium according to claim 4, said positioning periphery section of invention of claim 5 is a crevice configuration corresponding to said weight side positioning opening. In claim 5, the positioning periphery section is a crevice configuration corresponding to weight side positioning opening. Positioning of weight and a chassis can be performed using the positioning periphery section of this crevice configuration, and weight side positioning opening.

[0012]

[Embodiment of the Invention] Hereafter, the gestalt of suitable operation of this invention is explained to a detail based on an accompanying drawing. In addition, since the gestalt of the operation described below is the suitable example of this invention, desirable various limitation is attached technically, but especially the range of

this invention is not restricted to these gestalten, as long as there is no publication of the purport which limits this invention in the following explanation.

[0013] Drawing 1 is the decomposition perspective view showing the gestalt of desirable operation of the drive equipment of the information record medium of this invention. In drawing 1 R> 1, rotating the disk-like information record medium D, the drive equipment 10 of this information record medium reproduces the information currently recorded on the information record medium D, or has the function which records information to the information record medium D. However, even if the drive equipment 10 of this information record medium has only the function which reproduces the information currently recorded on the disk-like information record medium D, of course, it is not cared about. They are, for example like [ although the disk-like information record media D are an optical disk, a magneto-optic disk etc. ] CD-ROM (read-only memory using a compact disk), and CD (compact disk) and CD-RW (rewritable compact disk) as an optical disk.

[0014]

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TECHNICAL FIELD

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[Field of the Invention] This invention records the information on an information record medium, or relates to the drive equipment of the information record medium of the shape of a disk for reproducing information to an information record medium.

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PRIOR ART

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[Description of the Prior Art] Drawing 8 and drawing 9 have a perspective view, and show the drive equipment of the information record medium of the conventional technique. Traversing mechanism 120a with the role of drive equipment 120 moving an optical pickup 130 in the direction of a path of a disk-like information record medium, or rotating an information record medium with a spindle motor, The information record medium consists of loading, the loading device section (not shown) which ejects, and dynamic-vibration-reducer 121 grade which consists of the drive and circuit section (not shown) which controls or carries out junction with an external device, and weight 122 and two or more elastic bodies 123 in them.

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[0004] If the effectiveness of this dynamic vibration reducer 121 is described simply, the dynamic vibration reducer 121 is very useful to the drive equipment to which vibration generated because an information record medium rotates on a specific frequency, and the vibration from the outside of drive equipment 120 are absorbed, it has the effectiveness of reducing vibration of traversing mechanism 120a, and improvement in the speed of rotation of the information record medium by the spindle motor 131 progresses. That is, if an information record medium with big imbalance rotates at high speed and a big vibration occurs inside traversing mechanism 120a, since it may have a bad influence on record playback of normal information -- vibration is impressed to an optical pickup 130 -- it is useful to form a dynamic vibration reducer 121 in drive equipment 120. However, although it was very useful to have formed a dynamic vibration reducer in drive equipment, the drive equipment of the conventional technique had the fault that it was very difficult to attach a dynamic vibration reducer.

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EFFECT OF THE INVENTION

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[Effect of the Invention] according to this invention, as explained above, the workability at the time of attaching the weight of a dynamic vibration reducer in the chassis of a traversing mechanism is boiled markedly, and it improves, and it can improve and the location precision of weight can be miniaturized.

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TECHNICAL PROBLEM

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[Problem(s) to be Solved by the Invention] Henceforth, the reason why anchoring of a dynamic vibration reducer 121 is difficult is explained. A dynamic vibration reducer 121 is the configuration that weight 122 was attached in the chassis 124 of traversing mechanism 120a through the elastic body [ two or more (drive equipment 120 four pieces) ] 123, as point \*\* was carried out. The weight 122 of a dynamic vibration reducer 121 needs to attach in a certain amount of precision, in order to prevent interference with the components and the loading device section which constitute traversing mechanism 120a. However, since it must be attached in a chassis 124 through the elastic bodies 123, such as rubber location precision is hard to secure, when attaching weight 121, weight 122 securing precision, workability is low [ weight / it is difficult to fully secure the anchoring precision of weight 121, and ]. Moreover, in order in other words to prevent interference with components, a loading device, etc. which were prepared in traversing mechanism 120a, such as a motor 131, with the drive equipment of the conventional technique since anchoring precision was low, it is necessary to prepare a large opening beforehand, and a miniaturization is difficult.

[0006] As mentioned above, although the drive equipment with the dynamic vibration reducer of the conventional technique was drive equipment which was adapted for improvement in the speed of rotation of an information record medium, it had the fault of not being devised at all, about the anchoring precision of a dynamic vibration reducer, and the workability of anchoring. Moreover, in order to prevent interference with weight 122 and other components although anchoring precision is low therefore, the large opening needed to be prepared, and the fault of being difficult required the miniaturization. then, this invention cancels the above-mentioned technical problem, it can markedly improve the workability at the time of attaching the weight of a dynamic vibration reducer in the chassis of a traversing mechanism, can improve, and can improve the location precision of weight, and it aims at offering the drive equipment of the information record medium which can be miniaturized.

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MEANS

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[Means for Solving the Problem] A motor for invention of claim 1 to rotate an information record medium, and the optical unit which records information on said information record medium, or reproduces the information on said information record medium, The traversing mechanism which has the chassis which holds said motor and sends said optical unit to radial [ of said information record medium ], It has the weight prepared through an elastic body to said traversing mechanism, and has the dynamic vibration reducer which absorbs vibration which said traversing mechanism produces. Said weight of said dynamic vibration reducer The attaching hole in which said elastic body is attached, and said attaching hole are another opening, and in case they position said weight to said chassis, they are drive equipment of the information record medium characterized by having weight side positioning opening for inserting the pin of a pointing device. in claim 1, since it is the structure which inserts the pin for pointing devices in case weight side positioning opening is prepared in the weight of a dynamic vibration reducer and weight is positioned to a chassis using this weight side positioning opening, the positioning workability at the time of attaching weight in a chassis can be markedly alike, and can improve, and the location precision of the weight to a chassis can be improved. And since what is necessary is just to prepare weight side positioning opening in a weight side in case weight is positioned on a chassis, drive equipment cannot become large but can be miniaturized.

[0008] Chassis side positioning opening for invention of claim 2 to insert said pin of said pointing device in said chassis in the drive equipment of an information record medium according to claim 1 in the location corresponding to said weight side positioning opening is prepared. In claim 2, chassis side positioning opening for fitting the pin of a pointing device over the location corresponding to weight side positioning opening is prepared in the chassis. Thereby, the pin of a pointing device can ensure positioning of weight and a chassis using weight side positioning opening and chassis side positioning opening.

[0009] In the drive equipment of an information record medium according to claim 2, both said weight side positioning opening and said chassis side positioning opening of invention of claim 3 are circle configurations.

[0010] Invention of claim 4 has the positioning periphery section for contacting the location corresponding to said weight side positioning opening in said pin of said pointing device on said chassis in the drive equipment of an information record medium according to claim 1. In claim 4, it has the positioning periphery section for constituting the pin of a pointing device in the location corresponding to weight side positioning opening on the chassis. Thereby, positioning of weight and a chassis can be performed to a chassis side using the positioning periphery section, without preparing positioning opening.

[0011] In the drive equipment of an information record medium according to claim 4, said positioning periphery section of invention of claim 5 is a crevice configuration corresponding to said weight side positioning opening. In claim 5, the positioning periphery section is a crevice configuration corresponding to weight side positioning opening. Positioning of weight and a chassis can be performed using the positioning periphery section of this crevice configuration, and weight side positioning opening.

[0012]

[Embodiment of the Invention] Hereafter, the gestalt of suitable operation of this invention is explained to a detail based on an accompanying drawing. In addition, since the gestalt of the operation described below is the suitable example of this invention, desirable various limitation is attached technically, but especially the range of this invention is not restricted to these gestalten, as long as there is no publication of the purport which limits this

invention in the following explanation.

[0013] Drawing 1 is the decomposition perspective view showing the gestalt of desirable operation of the drive equipment of the information record medium of this invention. In drawing 1 R> 1, rotating the disk-like information record medium D, the drive equipment 10 of this information record medium reproduces the information currently recorded on the information record medium D, or has the function which records information to the information record medium D. However, even if the drive equipment 10 of this information record medium has only the function which reproduces the information currently recorded on the disk-like information record medium D, of course, it is not cared about. They are, for example like [ although the disk-like information record media D are an optical disk, a magneto-optic disk etc. ] CD-ROM (read-only memory using a compact disk), and CD (compact disk) and CD-RW (rewritable compact disk) as an optical disk.

[0014] Roughly, the drive equipment 10 of the information record medium of drawing 1 consists of traversing mechanism 10a, a dynamic vibration reducer 11, other loading devices, an electrical circuit, etc. Although the loading device and the electrical circuit are not illustrated, a loading device carries out loading of the disk-like information record medium D to the spindle motor 40 of traversing mechanism 10a, or has the role which ejects from traversing mechanism 10a. The electrical circuit has the function to drive electrically or to perform control or electric junction with an external device to traversing mechanism 10a, a loading device, etc. Traversing mechanism 10a has the chassis 14, the spindle motor 40, the optical pickup (it is also called an optical unit) 50, and the feed gear 60 roughly. A chassis 14 is the member made by what carried out press working of sheet metal of the steel plate, and the thing which fabricated resin, and the rectangle-like opening 70 is formed in the center of a chassis 14. The hole 72 for attaching in another fixed part side which does not illustrate a chassis 14 is formed in the four corners of a chassis 14.

[0015] Drawing 2 expands and shows near the corner of the chassis 14 of drawing 1, the hole 72 mentioned above is established in the chassis 14, and another MENEJI 74 is formed near the hole 72. As shown in drawing 1, between two MENEJI 74 by the side of the long side of a chassis 14, chassis side [ two ] positioning opening 14a is formed. The spindle motor 40 of drawing 1 is being fixed on the chassis 14. This spindle motor 40 has chucking section 40A, and this chucking section 40A can hold the disk-like information record medium D removable. By energizing, this spindle motor 40 has the function to carry out continuation rotation of the information record medium D.

[0016] To the information record medium D, information is recorded by light or the optical pickup 50 has the function which reproduces the information on an information record medium. For this reason, the optical pickup 50 has the objective lens 51. The light by which outgoing radiation is carried out out of an optical pickup 50 can record information to the information record medium D, when the information record medium D irradiates through an objective lens 51. Moreover, another light is irradiated through an objective lens 51 at the information record medium D out of an optical pickup 50, and information currently recorded on the information record medium D can be reproduced by receiving the return light reflected in the information record medium D by the light sensing portion in an optical pickup 50 (read). With a feed gear 60, straight-line migration can be carried out along the radial [ radial / of R ], i.e., direction, of the information record medium D, and an optical pickup 50 can be positioned. The feed gear 60 has the guide rods 52 and 53. By locating these guide rods 52 and 53 in the opening 70 of a chassis 14, and operating the motor for seeking which is not illustrated, along the direction of R, an optical pickup 50 moves in the direction of R along with the guide rods 52 and 53, and positioning of it is attained.

[0017] Next, the dynamic vibration reducer 11 of drawing 1 is explained. The dynamic vibration reducer 11 has the screw 15 grade of 13 or 4 elastic bodies of 12 or 4 weight roughly. Weight 12 is made by carrying out press working of sheet metal of the steel plate, or carrying out die-casting processing of the metal, and has the rectangle-like opening 80. The elastic body 13 is being fixed to the hole for attachment of the four corners of weight 12 by fitting.

[0018] Drawing 3 shows the condition that the elastic body 13 was inserted in and fixed to hole 13B of corner 13A of weight 12. Although it is the metal thing fabricated by press working of sheet metal, die-casting processing, etc., and weight 12 can fabricate an elastic body 13 by rubber, an elastomer, etc., even if it is a metal spring, of course, it is not cared about. In the example of drawing 3, the example of the elastic body 13 made of rubber is shown, and the elastic body 13 has lobe 13C and lobe 13D and adhesion section 13E. Crevice 13F

between Lobes 13C and 13D are inserted in hole 13B for attachment of weight 12. Thereby, the elastic body 13 is certainly being fixed so that it may not separate to weight 12. After adhesion section 13E of an elastic body 13 assembles, it is stuck to it by top-face 14F of a chassis 14.

[0019] The screw 15 has large diameter section 15A and a little thin screw section 15B. Screw section 15B is thrust into MENEJI 74 of a chassis 14. Thereby, moreover, weight 12 can be certainly attached through an elastic body 13 using a screw 15 and MENEJI 74 to a chassis 14. It passes along large diameter section 15A of a screw 15, and screw section 15B in centrum 13G of an elastic body 13. Thus, when having prepared centrum 13G for letting a screw 15 pass in the oscillating object 13 and attaching the dynamic vibration reducer 11 of drawing 1 in a chassis 14 side, it lets a screw 15 pass to centrum 13G of the elastic body 13 beforehand attached in weight 12, and can fix to a chassis 14. Consequently, weight 12 can vibrate freely through an elastic body 13. This elastic body 13 can demonstrate the function of spring 13S and damper 13T between weight 12 and a chassis 14 like drawing 4.

[0020] As shown in drawing 1 and drawing 5, weight side [ two ] positioning opening 12a is formed in weight 12. Between two elastic bodies 13 and 13 by the side of the long side of weight 12, such weight side positioning opening 12a detaches spacing, and is formed. The weight side positioning openings 12a and 12a are formed in the location which corresponds with the chassis side positioning openings 14a and 14a of a chassis 14. That is, the weight side positioning openings 12a and 12a are formed in the location of the almost same plane coordinates as the chassis side positioning openings 14a and 14a. Although two pieces are formed at a time in the example of drawing 1 and drawing 5, respectively, even if weight side positioning opening 12a and chassis side positioning opening 14a form three or the number beyond it, of course, they are not cared about. Although both weight side positioning opening 12a and chassis side positioning opening 14a are the holes of a circle configuration, for example, by making it the hole of a circle configuration, they can only make the configuration of the pin for positioning of a fixture the shape of a cylindrical shape, can make the fixture itself cheap, and can also acquire a high precision by considering as a cylinder.

[0021] It is prepared in order that such weight side positioning opening 12a and chassis side positioning opening 14a may perform mutual positioning of weight 12 and a chassis 14, and weight 12 and a chassis 14 can be positioned by using the assembly jig 85 as shown in drawing 5. This assembly jig 85 has two gage pins 41, and has projected the gage pin 41 along the locations P1 and P2 corresponding to the location of weight side positioning opening 12a and chassis side positioning opening 14a, respectively. An assembly jig 85 can be made pressing a pin fit on a tabular metal, or by cutting a pin and a base by one.

[0022] Next, the means of attachment to the chassis 14 of the dynamic vibration reducer 11 in the drive equipment 10 of the information record medium of drawing 1 are explained.

\*\* Attach the elastic body 13 made of the rubber of a hollow cylinder configuration in the hole of weight 12.

\*\* It lets the gage pin 41 of an assembly jig 85 pass to chassis 14 side positioning opening 14a, and it decides the location at the time of through and anchoring further to be weight 12 side positioning opening 12a.

\*\* Attach a screw 15 in through and a chassis 14 centrum 13G of an elastic body 13.

In case the point here fixes weight 12 to a chassis 14 through an elastic body 13, it uses prepared weight side positioning opening 12a of weight 12 and a chassis 14, and chassis side positioning opening 14a, and is that it is fixing while positioning. Usually, by this invention, although anchoring precision was hard to secure anchoring through an elastic body and workability was low, since opening for positioning was prepared in a chassis 14 and weight 12 and weight 12 was attached, positioning by the assembly jig 85, the location precision of weight 12 could be secured and workability improved.

[0023] Next, drawing 6 and drawing 7 show the gestalt of another operation of the drive equipment of the information record medium of this invention. With the drive equipment 10 of the information record medium of drawing 6, the same thing as the weight 12 of the dynamic vibration reducer 11 of drawing 1 can be used for the structure of the weight 12 of a dynamic vibration reducer 11. However, the structure of the chassis 14 of traversing mechanism 10a is a little different, and chassis side positioning opening 14a as shown in drawing 1 is not formed in the chassis 14. Instead, in order to perform positioning of weight 12 and a chassis 14, the positioning periphery section 95 is formed in long side side 92 of a chassis 14.

[0024] The assembly jig 87 has the body 86 and the positioning object 185. The positioning object 85 has two pins [ two ] 84 which will be rich pin 83. Pins 83 and 83 have die length shorter than a pin 84. Pins 83 and 83 fit

into weight side positioning opening 12a of weight 12. On the other hand, in the middle of the remaining pins 84 and 84, while a part runs against the positioning periphery section 95 of a chassis 14, the tip of pins 84 and 84 has come to get into the hole 88 of the body 86 of an assembly jig 87. The body 86 of an assembly jig 87 has the heights 79 for positioning the four corners of a chassis 14 in the case of assembly. Thereby, positioning of weight 12 and a chassis 14 can be performed using the pins 83 and 83 and pins 84 and 84 of the positioning object 185.

[0025] Drawing 7 is the gestalt of still more nearly another operation of the drive equipment of the information record medium of this invention, and weight 12 has the weight side [ two ] positioning openings 12a and 12a. On the other hand, the chassis 14 has crevice 14W. These crevice 14W are equivalent to the spill port for dashing the middle of the gage pins 41 and 41 of an assembly jig 85 against the positioning periphery section 99. Even if such, weight 12 and a chassis 14 can perform mutual positioning using gage pins 41 and 41.

[0026] By the way, this invention is effective, whether it is not only applicable to the drive equipment 10 of the information record medium which has traversing mechanism 10a as shown in drawing 1 , and a dynamic vibration reducer 11, but is only traversing mechanism 10a or it is only a dynamic vibration reducer 11, or if positioning opening for positioning is prepared when positioning traversing mechanism 10a or a dynamic vibration reducer 11 to other members.

[0027] the drive equipment of the information record medium carrying the dynamic vibration reducer of this invention -- the weight of a dynamic vibration reducer -- or since opening for positioning was prepared in both weight and a chassis, the workability at the time of attaching weight in a chassis is markedly alike, and can improve. And since the location precision of weight also improved, an opening did not need to be widely secured since interference with an edge strip was prevented easily and positioning opening and the positioning periphery section were only prepared, the miniaturization became possible.

[0028] By the way, this invention is not limited to the gestalt of the above-mentioned implementation. Although the configurations of a chassis 14 and weight 12 are rectangles-like in drawing 1 , of course, it does not matter even if it is elliptical, other configurations, for example, circle configuration. Even if the configurations of weight side positioning opening 12a and chassis side positioning opening 14a have the shape not only of a circle configuration but a square, and the shape of another polygon, they are elliptical etc. and, of course, are not cared about.

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DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[Drawing 1] The decomposition perspective view showing the gestalt of desirable operation of the drive equipment of the information record medium of this invention.

[Drawing 2] The decomposition perspective view showing the weight of drawing 1 , and a part of chassis.

[Drawing 3] The sectional view showing an elastic body and its neighborhood.

[Drawing 4] The equivalence Fig. of an elastic body.

[Drawing 5] The perspective view showing the procedure of positioning weight and a chassis by the assembly jig.

[Drawing 6] The perspective view showing the gestalt of another operation of the drive equipment of the information record medium of this invention.

[Drawing 7] The perspective view showing the gestalt of still more nearly another operation of the drive equipment of the information record medium of this invention.

[Drawing 8] The perspective view showing conventional drive equipment.

[Drawing 9] The perspective view showing some drive equipments of drawing 8 .

[Description of Notations]

10 [ ... Weight, 12a / ... Weight side positioning opening 13 / ... An elastic body, 14 / ... A chassis, 14a / ... Chassis side positioning opening 40 / ... A spindle motor (motor), 41 / ... A gage pin, 50 / ... An optical pickup (optical unit), 60 / ... The feed gear of an optical pickup, D / ... Disk-like information record medium ] ... The drive equipment of an information record medium, 10a ... A traversing mechanism, 11 ... A dynamic vibration reducer, 12

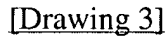
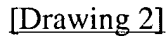
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[Translation done.]

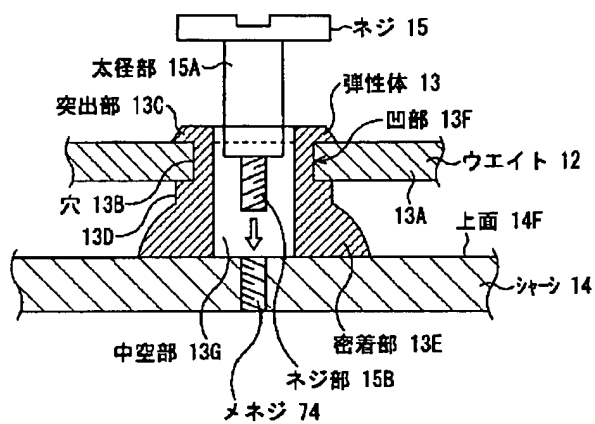
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- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.\*\*\*\* shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

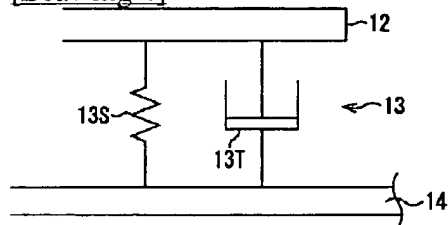
[Drawing 1]



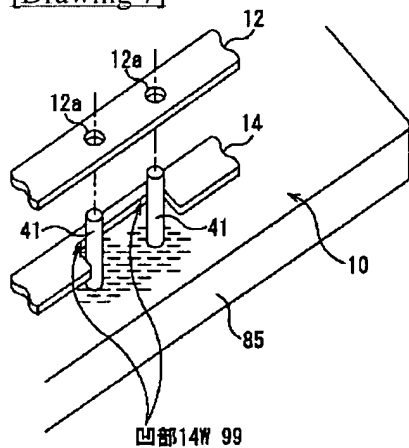
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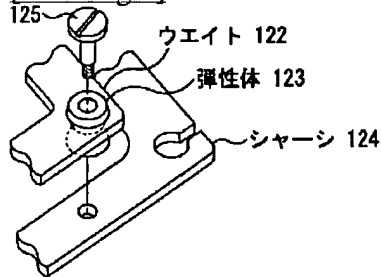
[Drawing 4]



[Drawing 7]

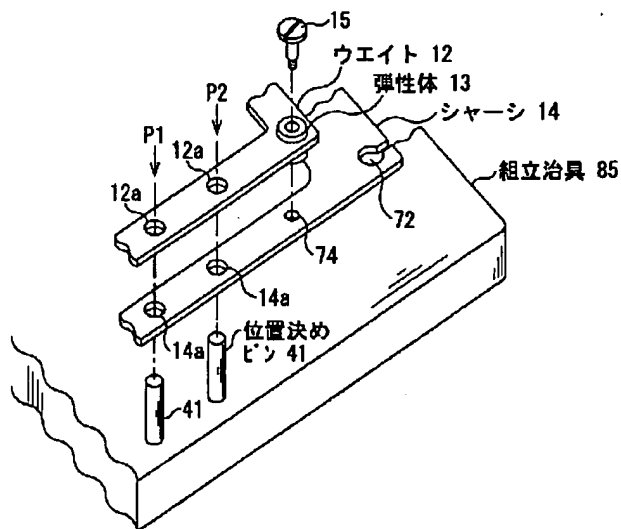


[Drawing 9]

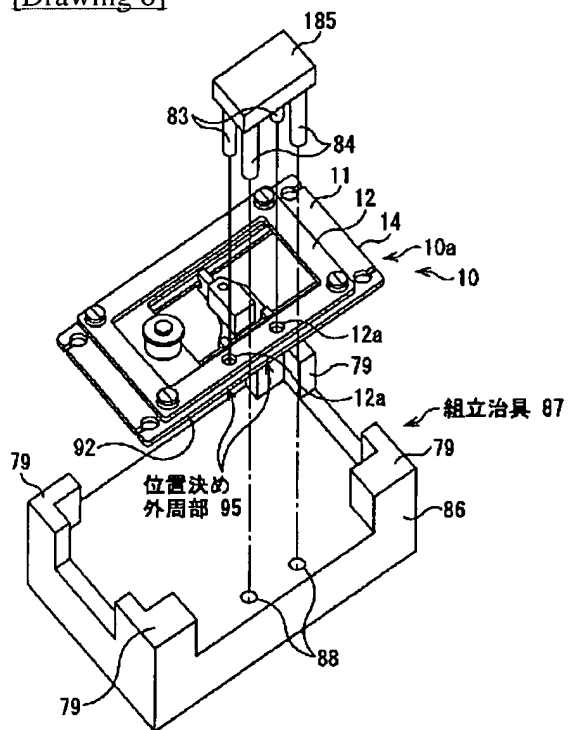


[Drawing 5]

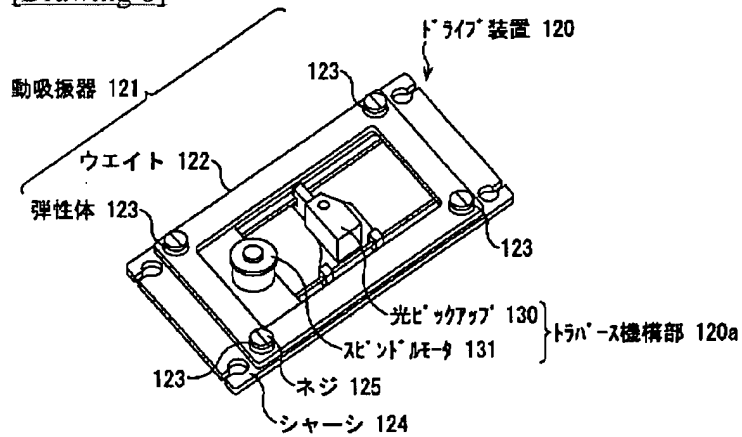
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[Drawing 6]



[Drawing 8]



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[Translation done.]

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